

LISTING OF CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Please cancel claims 1, 3, and 4 and add new claims 5-19 as follows.

1-4. (Cancelled)

5. (New) A pipe connecting structure, comprising:

a plastic coated metal pipe including at least one bead circumferentially protruding from a surface of the metal pipe, the plastic coated on the metal pipe being a nonconductive plastic film, and the at least one bead including bare metal exposed above the nonconductive plastic film; and

a conductive plastic tube, the conductive plastic tube having an end portion with a leading edge; and

the plastic coated metal pipe and the conductive plastic tube being fused together at a position between the leading edge of the plastic coated metal pipe and the at least one bead including the exposed bare metal of the plastic coated metal pipe, and the exposed bare metal of the at least one bead contacting the conductive plastic tube.

6. (New) The pipe connecting structure according to claim 5, wherein the plastic coated metal pipe and the conductive plastic tube are fused together by a press fitting of the plastic coated metal pipe into the conductive plastic tube.

7. (New) The pipe connecting structure according to claim 5, wherein a seal member is arranged around the metal pipe, on top of the non-conductive plastic film, and along the length of the plastic coated metal pipe between the exposed bare metal of the plastic coated metal pipe and the fused position of the plastic coated metal pipe and the conductive plastic tube.

8. (New) The pipe connecting structure according to claim 5, wherein the at least one bead extends around an entire circumference of the plastic coated metal tube.

9. (New) The pipe connecting structure according to claim 5, comprising two beads extending around an entire circumference of the plastic coated metal tube.

10. (New) The pipe connecting structure according to claim 5, comprising two beads extending around an entire circumference of the plastic coated metal tube, wherein one of the two beads includes the exposed bare metal above the nonconductive plastic film, and another of the two beads is not exposed through the nonconductive plastic film.

11. (New) The pipe connecting structure according to claim 10, wherein the bead including the exposed bare metal is larger than the non-exposed bead.

12. (New) The pipe connecting structure according to claim 5, further comprising a plastic guide cap arranged on the end of the plastic coated metal pipe, the plastic guide cap having a tapered surface fitting within the conductive plastic tube.

13. (New) A pipe connecting structure, comprising:

- a metal pipe including at least one bead circumferentially protruding from a surface of the metal pipe;
- a nonconductive plastic film coated on an outer surface of the metal pipe at locations other than an upper portion of the at least one bead of the metal pipe, the upper portion of the at least one bead of the metal pipe being exposed through the nonconductive plastic film;
- a seal member arranged around the metal pipe on top of the nonconductive plastic film;
- and
- a conductive plastic tube,

wherein the metal pipe with the nonconductive plastic film coating is received and press fit within the conductive plastic tube, the exposed upper portion of the at least one bead of the metal pipe contacts the conductive plastic tube, and the seal member contacts both the conductive plastic tube and the nonconductive plastic film coating on the metal pipe along a length of the metal pipe adjacent the exposed upper portion of the at least one bead of the metal pipe.

14. (New) The pipe connecting structure according to claim 13, wherein the seal member is arranged along the length of the metal pipe between the upper portion of the at least one bead of the metal pipe and an end of the metal pipe.

15. (New) The pipe connecting structure according to claim 13, wherein the at least one bead of the metal pipe is arranged along the length of the metal pipe between the seal member and an end of the metal pipe.

16. (New) The pipe connecting structure according to claim 13, wherein the at least one bead extends around an entire circumference of the plastic coated metal tube.

17. (New) The pipe connecting structure according to claim 13, wherein upper portions of at least two beads of the metal pipe are exposed through the nonconductive plastic film.

18. (New) The pipe connecting structure according to claim 13, wherein the at least one bead with the upper portion exposed is larger than another bead circumferentially protruding from a surface of the metal pipe.

19. (New) The pipe connecting structure according to claim 13, further comprising a plastic guide cap arranged on the end of the metal pipe, the plastic guide cap having a tapered surface fitting within the conductive plastic tube, and a second seal member arranged along the length of the pipe adjacent the at least one bead.